



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

al

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/976,604	10/12/2001	Mark D. Penk	A-6727	3301
5642	7590	05/07/2007	EXAMINER	
SCIENTIFIC-ATLANTA, INC. INTELLECTUAL PROPERTY DEPARTMENT 5030 SUGARLOAF PARKWAY LAWRENCEVILLE, GA 30044			ENGLAND, DAVID E	
ART UNIT		PAPER NUMBER		
2143				
NOTIFICATION DATE		DELIVERY MODE		
05/07/2007		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PTOmail@sciatl.com

Office Action Summary	Application No.	Applicant(s)	
	09/976,604	PENK ET AL.	
	Examiner	Art Unit	
	David E. England	2143	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 24 January 2007.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 44-69 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 44-69 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)
 Paper No(s)/Mail Date _____.
- 4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____.
- 5) Notice of Informal Patent Application
- 6) Other: _____.

DETAILED ACTION

1. Claims 44 – 69 are presented for examination.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 44 – 48, 51 – 54, 59 – 64 and 66 – 69 are rejected under 35 U.S.C. 102(e) as being anticipated by Teraoka U.S. Patent No. 6292836.

4. Referencing claim 44, as closely interpreted by the Examiner, Teraoka teaches a system for mapping a digital network, the system comprising:

5. a controller configured to send an initiate signal, (e.g. col. 6, lines 20 – 35,

“VendPointAddr-B={VIP_C, port_C}” & col. 6, line 54 – col. 7, line 8, “VIP address of computer C=VIPaddr_C, IP address of computer C=IPaddr_D”); and

6. a plurality of network devices in communication with the controller, each network device configured to receive a transport stream that includes a stream of data packets, each data packet including a header and a data payload, each of the plurality of network devices further configured to receive the initiate signal from the controller, (e.g. col. 6, lines 20 – 35,

"VendPointAddr-B={VIP_C, port_C}" & col. 6, line 54 – col. 7, line 8, "VIP address of computer C=VIPaddr_C, IP address of computer C=IPaddr_D").;

7. wherein, in response to receiving the initiate signal from the controller, each of the plurality of network devices generates a network message and sends the network message to the controller, the network message including information associated with the respective network device, (e.g. col. 6, lines 20 – 35, *"VendPointAddr-B={VIP_C, port_C}" & col. 6, line 54 – col. 7, line 8, "VIP address of computer C=VIPaddr_C, IP address of computer C=IPaddr_D").;* and

8. wherein, in response to receiving the network messages from the network devices, the controller generates a transport stream map, the transport stream map representing a flow of transport streams among the plurality of network devices, (e.g. col. 6, lines 20 – 35, *"VendPointAddr-B={VIP_C, port_C}" & col. 6, line 54 – col. 7, line 8, "VIP address of computer C=VIPaddr_C, IP address of computer C=IPaddr_D").*

9. Referencing claim 45, as closely interpreted by the Examiner, Teraoka teaches each of the network messages includes a device identifier, which is associated with the device that transmits the network message to the controller, (e.g. col. 6, lines 20 – 35, *"VendPointAddr-B={VIP_C, port_C}" & col. 6, line 54 – col. 7, line 8, "VIP address of computer C=VIPaddr_C, IP address of computer C=IPaddr_D").*

10. Referencing claim 46, as closely interpreted by the Examiner, Teraoka teaches each of the network messages includes a transport stream identifier, which is associated with a given

transport stream, wherein the given transport stream is a transport stream received and monitored by the device associated with the device identifier, (e.g. col. 6, lines 20 – 35, “*VendPointAddr-B={VIP_C, port_C}*” & col. 6, line 54 – col. 7, line 8, “*VIP address of computer C=VIPaddr_C, IP address of computer C=IPaddr_D*”).

11. Referencing claim 47, as closely interpreted by the Examiner, Teraoka teaches each of the network messages includes network information related to at least one characteristic of the digital network, (e.g. col. 6, lines 20 – 35, “*VendPointAddr-B={VIP_C, port_C}*” & col. 6, line 54 – col. 7, line 8, “*VIP address of computer C=VIPaddr_C, IP address of computer C=IPaddr_D*”).

12. Referencing claim 48, as closely interpreted by the Examiner, Teraoka teaches each of the network messages includes an input transport stream identifier (input TSID) and an output transport stream identifier (output TSID), the input TSID identifying the transport stream received by the respective network device and the output TSID identifying the transport stream transmitted by the respective network device, (e.g., col. 1, lines 29 – 55 & col. 6, lines 20 – 35).

13. Referencing claim 64, as closely interpreted by the Examiner, Teraoka teaches prior to receiving the second network message, the method further comprises:

14. sending a mapping initiation message to a second plurality of devices included in the digital network, wherein the second plurality of devices includes the first plurality of devices,

and each of the first plurality of devices respond to the mapping initiation message by sending the second network message, (e.g., col. 1, lines 29 – 55 & col. 6, lines 20 – 35).

15. Claims 51 – 54, 59 – 63 and 66 – 69 are rejected for similar reasons stated above.

Claim Rejections - 35 USC § 103

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

17. Claims 49, 50, 55 – 58 and 65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Teraoka in view of Rao (6789118).

18. As per claim 49, as closely interpreted by the Examiner, Teraoka does not specifically teach the controller is further configured to determine if a conflict exists between two TSIDs, and, in response to determining that a conflict exists, creating unique TSIDs to resolve the conflict. Rao teaches the controller is further configured to determine if a conflict exists between two TSIDs, and, in response to determining that a conflict exists, creating unique TSIDs to resolve the conflict, (e.g. col. 20, lines 41 – 59). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Rao with Teraoka

because it would be more secure if the system only gave specific access and privileges to users of a specific network. Also in doing so could block out potential invaders to a system.

19. As per claim 50, as closely interpreted by the Examiner, Teraoka does not specifically teach the controller is configured to transmit a message to a particular device associated with the conflicting TSID, and in response to the second message, to remap the output TSID to the unique TSID. Rao teaches the controller is configured to transmit a message to a particular device associated with the conflicting TSID, and in response to the second message, to remap the output TSID to the unique TSID, (e.g. col. 20, lines 41 – 59). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Rao with Teraoka because of similar reasons stated above.

20. Claims 55 – 58 and 65 are rejected for similar reasons as stated above.

Response to Arguments

21. Applicant's arguments filed 01/24/2007 have been fully considered but they are not persuasive.

22. **In the Remarks**, Applicant argues in substance Teraoka does not teach the limitations set forth in claims 44 – 50. More specifically, Teraoka does not teach that in response to receiving the initiate signal, each device generates a network message and sends the network message to

the controller. Instead, Teraoka appears to teach a connection between two end points and fails to disclose a network message sent from a plurality of devices to a controller.

23. As to the first remark, Applicant is asked to draw their attention to the cited areas of Teraoka. It is stated that there are, as an example, three computers A, B and C. These computers communicate their information, IP addresses and other parameter information, once a connection is established, to update their routing tables the parameters.

24. **In the Remarks**, Applicant argues in substance that Teraoka appears to be silent regarding the concept of transport stream maps, particularly in response to network messages from a plurality of device and particularly a transport stream map representing a flow of transport streams among the plurality of network devices. Teraoka appears to teach unchanging identifiers for computers (end points), to allow the ability of a first computer to communicate with a second computer regardless of the location of the second computer on the network.

25. As to the second remark, the interpretation of transport stream maps appears to be information utilized in routing tables, i.e., mapping a network. The “flow of a transport stream” can be interpreted as the connections in the network, from one node to another, that a stream of information would have to traverse or flow. Teraoka teaches that each packet is utilized to map out where in the network their device is located and therefore the information that is sent is routing or mapping information to update information in their tables.

26. **In the Remarks**, Applicant argues in substance that Teraoka does not teach a network message including a device identifier, an input transport stream identifier, and an output transport stream identifier.

27. As to the third remarks, the input and output transport stream identifiers can be interpreted in light of the prior art and how the claim language is written as follows. It appears that a port on a device can be both input and output, it depends on whether or not it is sending or receiving from that port, i.e., sending information=output port, receiving information= input port. Furthermore, the claim language states “one or more” which could be interpreted as one and only one. Teraoka teaches ports identification numbers on all nodes and depending on which node is sending or receiving information will designate that node’s port as input or output in the packet as a destination or sending port, column 4 et seq.

28. Furthermore, when reviewing a reference the applicants should remember that not only the specific teachings of a reference but also reasonable inferences which the artisan would have logically drawn therefrom may be properly evaluated in formulating a rejection. *In re Preda*, 401 F. 2d 825, 159 USPQ 342 (CCPA 1968) and *In re Shepard*, 319 F. 2d 194, 138 USPQ 148 (CCPA 1963). Skill in the art is presumed. *In re Sovish*, 769 F. 2d 738, 226 USPQ 771 (Fed. Cir. 1985). Furthermore, artisans must be presumed to know something about the art apart from what the references disclose. *In re Jacoby*, 309 F. 2d 513, 135 USPQ 317 (CCPA 1962). The conclusion of obviousness may be made from common knowledge and common sense of a person of ordinary skill in the art without any specific hint or suggestion in a particular reference. *In re Bozek*, 416 F.2d 1385, 163 USPQ 545 (CCPA 1969). Every reference relies to some extent

on knowledge of persons skilled in the art to complement that which is disclosed therein. In re Bode, 550 F. 2d 656, 193 USPQ 12 (CCPA 1977).

29. **In the Remarks**, Applicant argues in substance Teraoka is silent concerning grouping devices into tiers.

30. As to the fourth remark, Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references. Applicant is asked to view the cited areas in and around what is stated in the rejection of claim 44. Furthermore, artisans must be presumed to know something about the art apart from what the references disclose. In re Jacoby, 309 F. 2d 513, 135 USPQ 317 (CCPA 1962). The conclusion of obviousness may be made from common knowledge and common sense of a person of ordinary skill in the art without any specific hint or suggestion in a particular reference. In re Bozek, 416 F.2d 1385, 163 USPQ 545 (CCPA 1969). Every reference relies to some extent on knowledge of persons skilled in the art to complement that which is disclosed therein. In re Bode, 550 F. 2d 656, 193 USPQ 12 (CCPA 1977).

31. **In the Remarks**, Applicant argues in substance that Teraoka does not assign identifiers to transport streams and associating each assigned unique transport stream identifier with a particular device that transmits the transport stream having the unique transport stream identifier assigned thereto.

32. As to the fifth remark, in column 5 of Teraoka it is stated, "where, "VIPAddr_A" stands for the VIP address of the computer A and "port_A" for the **port number assigned when "VEndPoint_A" was generated by the computer A**. The same holds for "VIPAddr_B" and "port_B." Therefore it is clear that Teraoka teaches the claim language. The other limitation is already discussed in the above response to the remarks and can be applied here.

33. **In the Remarks**, Applicant argues in substance that Teraoka and Rao, taken alone or in combination, fail to teach or suggest the limitations discussed above in the independent claims 44, 51 and 59.

34. As to the last remark, Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

Conclusion

35. **THIS ACTION IS MADE FINAL**. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

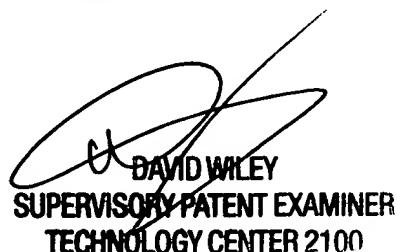
Any inquiry concerning this communication or earlier communications from the examiner should be directed to David E. England whose telephone number is 571-272-3912. The examiner can normally be reached on Mon-Thur, 7:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Wiley can be reached on 571-272-3923. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

David E. England
Examiner
Art Unit 2143

DE *DE*



DAVID WILEY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100